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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,321	10/01/2001	Jonathon Michael Blackburn	0623.0860002/LBB/Y-W	4288
35437	7590	03/25/2004	EXAMINER	
MINTZ LEVIN COHN FERRIS GLOVSKY & POPEO 666 THIRD AVENUE NEW YORK, NY 10017			LAM, ANN Y	
			ART UNIT	PAPER NUMBER

1641

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/967,321	Applicant(s) BLACKBURN ET AL.	
	Examiner Ann Y. Lam	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2, 6 and 9, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

As to claims 5-7, the claims are indefinite because they claim an array but depends from a claim that claims a method. Thus it is unclear what comprises the array. Also, claim 5 does not further limit the subject matter of a previous claim.

Claim 6 recites the limitation "the components" in 1. There is insufficient antecedent basis for this limitation in the claim.

As to claims 11-12, the claims are indefinite because they claim a method of using, but depend from a claim that claims an array. Also, there are no steps claimed. Also, they do not further limit the subject matter of a previous claim.

The other claims rejected under 112, second paragraph are indefinite because they depend from one of the above claims that are indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Morin et al., 6,610,839.

As to claim 1, Morin discloses a method of generating a protein array, which comprises cloning and expressing one or more proteins as full length proteins (column 156, line 20) which are each tagged at either the N- or C- terminus (column 156, line 21) with a marker moiety (column 156, line 22).

As to claim 2, the tag is a peptide sequence (column 156, line 22).

As to claim 3, the tag allows for purification of the individual proteins in the array.

As to claim 4, the tag is inserted such that the start or stop codon for each of the proteins is replaced (column 156, lines 22-23).

As to claim 5, an array prepared by the above method is disclosed (column 43, lines 7-34).

As to claim 6, the components of the array are immobilized to a solid surface (column 43, lines 7-34).

As to claim 7, the proteins are immobilized by means of the tag moiety (column 43, lines 39-46).

As to claims 8, 9, a method of screening compounds for biological activity which comprises the step of bringing the compounds into contact with a protein array described above and measuring binding of the compounds to the proteins in the array is disclosed (column 43, lines 27-39).

As to claims 11, 12, the array is used to screen a compound, protein or nucleic acid (column 43, lines 27-64).

As to claims 13, 14, the array is used to immobilize specific antibodies (column 43, lines 27-35).

As to claim 15, the method comprises the step of first providing the protein array using the method of claim 1 (column 43, lines 27-35).

Claims 1-9 and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoon, 6,673,914.

As to claim 1, Hoon discloses a method of generating a protein array (column 77, lines 28-31), which comprises cloning and expressing one or more proteins as full length proteins which are each tagged at either the N- or C- terminus with a marker moiety (column 77, lines 28-33).

As to claim 2, the tag is a peptide sequence, such as hexahistidine (column 77, line 31).

As to claim 3, the tag allows for purification of the individual proteins in the array (column 77, line 32).

As to claim 4, the tag is inserted such that the start or stop codon for each of the proteins is replaced (column 77, lines 30-32).

As to claim 5, an array prepared by the above method is disclosed (column 77 lines 31-35).

As to claim 6, the components of the array are immobilized to a solid surface (column 77, lines 31-35).

As to claim 7, the proteins are immobilized by means of the tag moiety (column 77, lines 31-35).

As to claims 8, 9, a method of screening compounds for biological activity which comprises the step of bringing the compounds into contact with a protein array described above and measuring binding of the compounds to the proteins in the array is disclosed (column 77, lines 31-38).

As to claims 11, 12, the array is used to screen a compound, protein or nucleic acid (column 77, lines 31-38).

As to claims 13, 14, the array is used to immobilize specific antibodies (column 77, lines 31-38).

As to claim 15, the method comprises the step of first providing the protein array using the method of claim 1 (column 77, lines 31-38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morin et al., 6,610,839, in view of Keesee et al., 6,218,131.

Morin discloses the invention substantially as claimed (see above). More specifically, Morin discloses an array prepared by the method of claim 1 (see above).

Morin also discloses that proteins of the invention can be used for specific protein-protein interactions (see column 43, lines 27-34). However, Morin does not disclose that the protein array can be used for screening proteins for specific protein-nucleic acid interactions which comprises bringing nucleic acid probes into contact with the array described above and measuring binding of the probes to the proteins in the array is disclosed.

Keesee discloses that target proteins can be reacted with a binding moiety, wherein the binding moiety may comprise a member of a ligand-receptor pair, antibody-antigen pair, protein-nucleic acid pair...(column 10, lines 38-34). Since Keesee discloses that it is well known in the art that proteins can be used in assays involving protein-nucleic acid binding, it would have been obvious that the proteins produced in

the method of claim 1 can be used in protein-nucleic acid binding assays for diagnostic purposes, which are well known in the art as taught by Keesee.

Conclusion

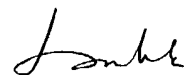
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ni et al., 6,503,184, discloses a method wherein the sequence encoding the polypeptides may be fused to a peptide marker (column 16, lines 32-48).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Y. Lam whose telephone number is 571-272-0822. The examiner can normally be reached on M-Sat 11-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.L.



LONG V. LE
SUPERVISORY PATENT EXAMINER
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03/20/04